

Drought Worsens a Bit Across the Rio Grande Valley

November Ends Extremely Dry; A Cooler Trend into Mid December

Synopsis

Extremely dry weather and periods of windy conditions to close out November brought deteriorating drought conditions. November rainfall totals were well below average; generally, a tenth of an inch or less fell across much of the region (Figure 1). A few spots, mainly in the Lower Valley, had 0.25 to 0.5 inches. The rain provided little relief. Persistent moderate to strong winds added to the drying; average winds speeds at Valley International Airport (Harlingen) were 12.1 mph, with the average peak gusts just over 30 mph! A strong cold front surged through the area on the 26th, bringing a day of northerly winds in excess of 25 mph but, more notably, three consecutive afternoons of humidity falling below 10 percent for all but the immediate coast. A [widespread "dry" freeze on November 28th](#) further exacerbated drought conditions. The latest U.S. Drought Monitor showed all areas under Extreme (D3) to Exceptional (D4) conditions.

Summary of Impacts

Wildfire Danger:

The combination of the current dry weather, Extreme to Exceptional drought conditions, periods of low humidity, and persistent wind maintain an elevated risk of rapid to explosive growth and spread of any fires that start. According to the Texas Forest Service, current fire danger risk across the Rio Grande Valley ranges from High to Very High. The latest [Keetch-Byram Drought Indices](#) (KBDI) range from 700 to 800 from

the Rio Grande Valley to the King Ranch. KBDI values of 600 to 700 cover the ranchlands of Brooks, Jim Hogg, and Zapata County. Burn bans remain in effect for all Counties of the Rio Grande Valley/Deep South Texas region. Residents are urged to refrain from conducting outdoor burning activities. Contact local officials for latest information concerning burn bans, including use of fireworks as the holiday season approaches. Remember, fire danger can change quickly from one day to another as wind direction and speed, and relative humidity, change sharply this time of year.

Agriculture:

According to the United States Department of Agriculture and [Texas Agrilife Extension Service](#) agents, most of the region remained very as winter approached. Rangeland and pasture remained in fair to poor condition, and soil moisture levels were excessively dry. Livestock producers were still dealing with no grazing, and expensive hay and supplemental feeds. Herds continued to be culled or liquidated. In the Lower Rio Grande Valley, farmers were actively irrigating onions and other vegetables, and harvesting sugarcane, citrus and corn.

Water Restrictions:

Several public water entities continue voluntary water conservation to avoid shortages or further restrictions. A few entities require mild restrictions. According to the Texas Commission on Environmental Quality (TCEQ),

Brownsville, TX (BRO): November, 2011 Monthly Observed Precipitation
Valid at 12/1/2011 1200 UTC- Created 12/2/11 17:40 UTC

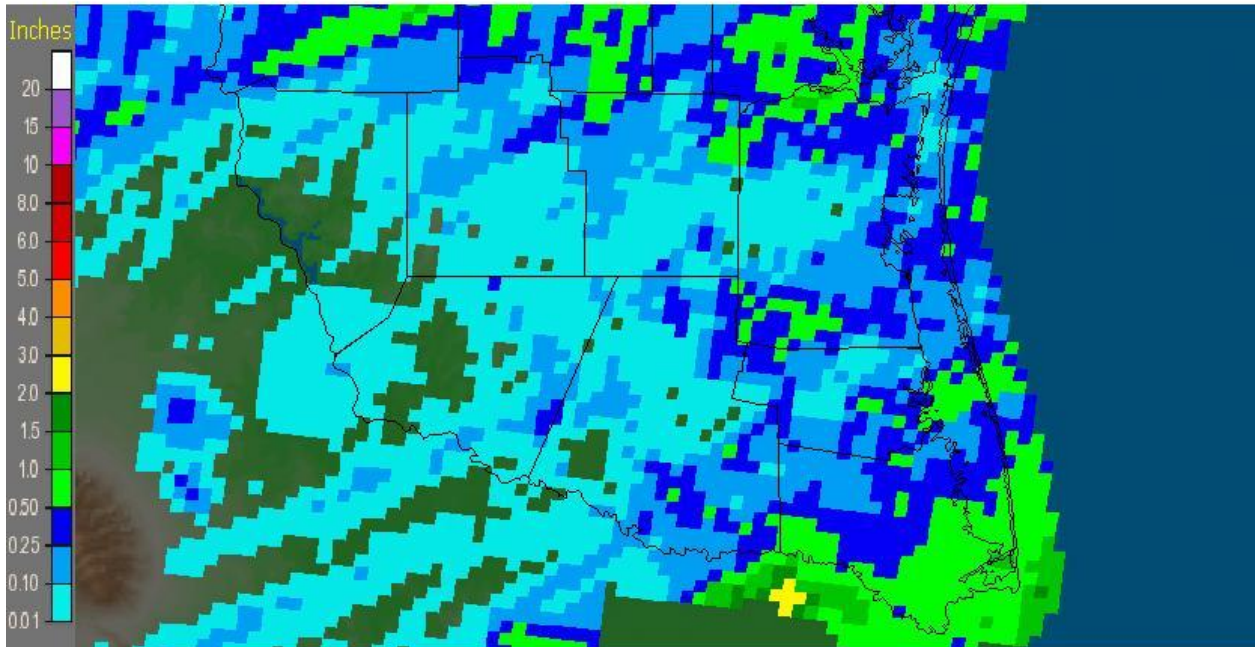


Figure 1. Radar and observed rainfall estimate for November, 2011, for the RGV/Deep South Texas region.

there are currently 2 restrictions in Cameron, 8 in Hidalgo, 4 in Starr County, 3 in Zapata, and 2 in Willacy County. Residents of the Rio Grande Valley/Deep South Texas are urged to conserve water.

Precipitation and Temperature Outlook

Meteorological: For the first half of December, a series of mid-level troughs of low pressure will dig into the western and northern portions of the Lower 48 states, while shallow mid-level ridging will prevail across the Gulf of Mexico and the Western Atlantic. This steady series of troughs will help push cold fronts through a little more frequently than in November. Prior to each front, isolated showers are expected, with

occasional light rain or drizzle for a day or two after the front passes. Rainfall through mid December will provide only very short term relief from the current drought conditions; but a silver lining will be the cooling trend (below) and cloudier skies, not too unusual for December but at least some break from the windy, warm, and dry pattern since summer (Figure 2).

Average high temperatures across Deep South Texas/Rio Grande Valley through mid December range in the lower 70s, with overnight lows from the mid 40s across the ranchland and other rural areas to the mid 50s in urbanized sections of the Lower Rio Grande Valley. Temperatures across the region will range a little below average for the

first half of December, but swings from warm to cold and back again will be similar to late November (below).

The long range climate outlook for The Rio Grande Valley/Deep South Texas region through February 2012 indicates that La Niña conditions will likely persist into early 2012. Any rainfall will provide only brief short term relief from the drought; there is a high confidence for further deterioration in drought conditions through the meteorological winter (December-February) 2012 (Figure 3). The tendency will favor warm and dry weather, but fronts will arrive both dry and wet, and there is an opportunity for arctic air to arrive on one or two stronger fronts between December 15th and February 15th.

Hydrologic:

Falcon and Amistad Reservoirs provide much of the water for the Lower Rio Grande Valley. Lake levels at Falcon showed a slight Decrease since mid-November; . storage at Falcon is down to 41.64 percent of normal conservation level; Amistad has decreased slightly to 84.39 percent of conservation.

Next issuance

This product will be updated around Thursday, December 16th 2011.

Related Web Sites

[Climate Prediction Center](#)
[International Boundary and Water Commission](#)
[Texas Agrilife Extension Service](#)
[Texas Commission on Environmental Quality](#)
<http://ticc.tamu.edu>

Acknowledgements

The [Drought Monitor](#) is a multi-agency effort involving NOAA's National Weather Service and [National Climatic Data Center](#), USDA, state and regional center climatologists, and the [National Drought Mitigation Center](#). Information for this statement has been gathered from NWS and FAA observation sites, the USDA, Texas Agrilife Extension Service district agents, Texas Forest Service, state and federal wildlife departments, TCEQ, and IBWC.

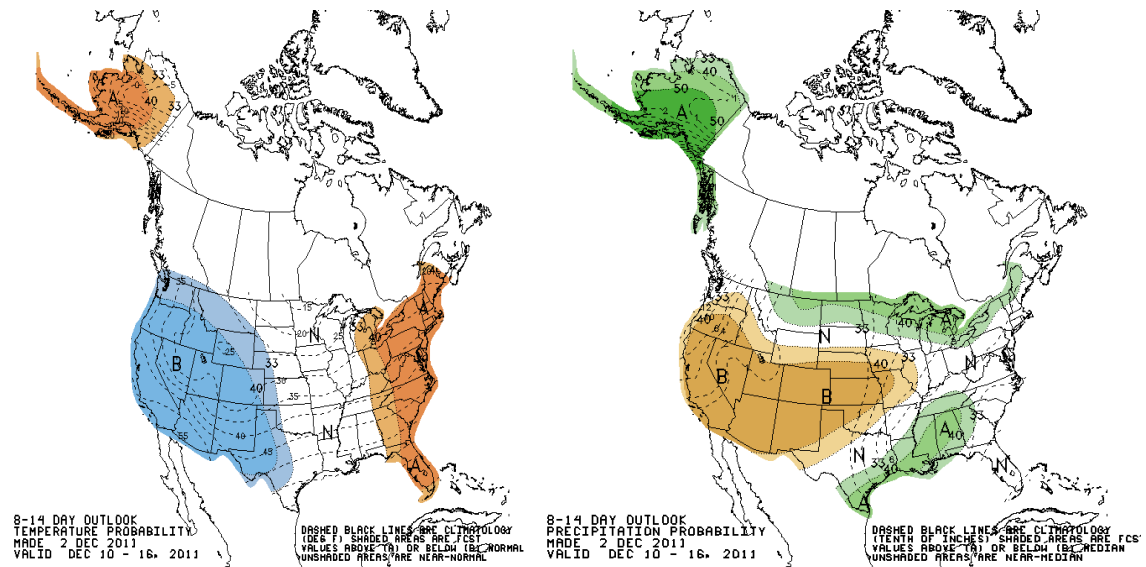


Figure 2: National Temperature and Precipitation Outlook through mid December. Notice the generally cooler, and slightly wetter, forecast.

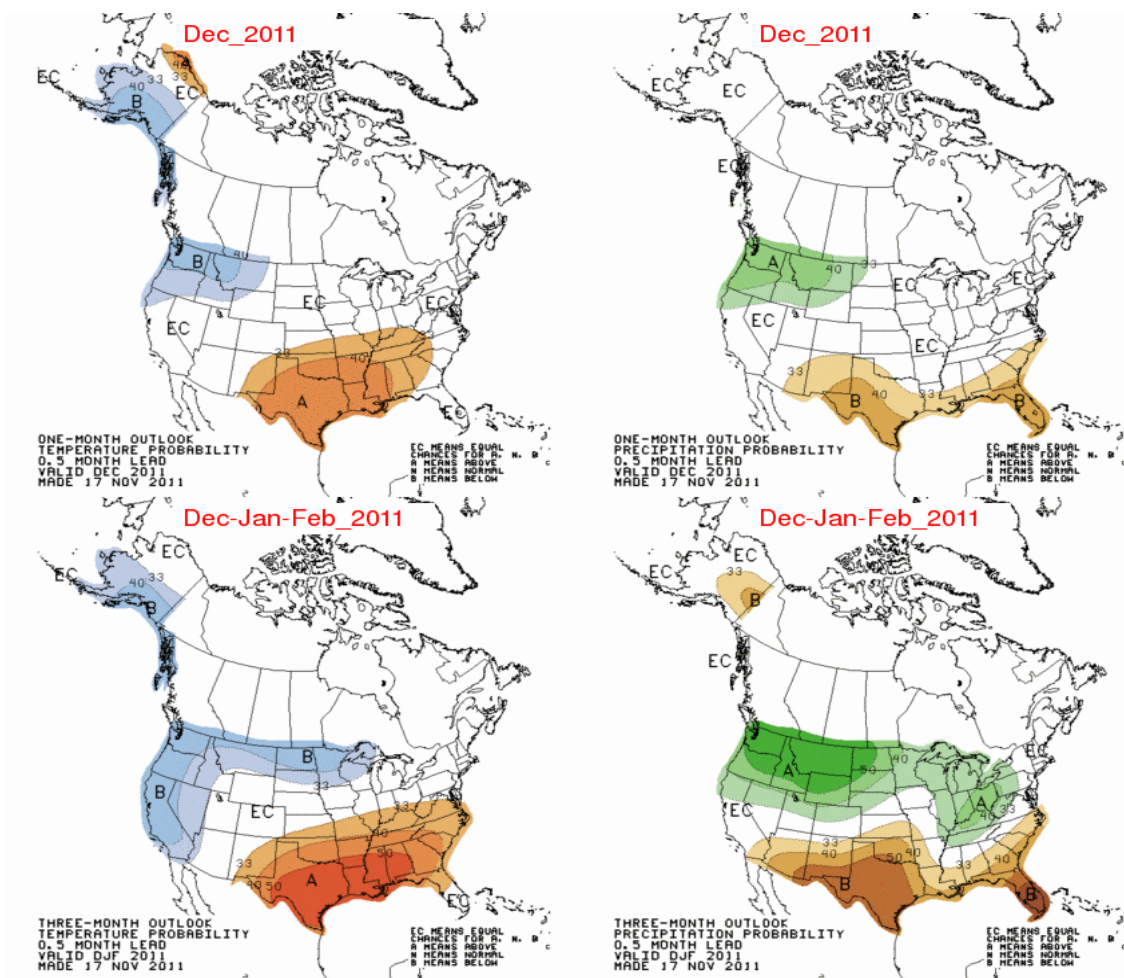


Figure 3: National Temperature and Precipitation Outlook, December 2011 to February 2012.

November: Topsy-turvy Temperatures, Still Dry

November 2011 fell into form for a La Niña Autumn, with dry fronts sweeping through the Valley and putting abrupt ends to periods of very warm to hot weather. Prior to the fronts, temperatures soared to or above records, reaching the upper 80s to lower 90s; daytime temperatures retreated into the upper 60s to lower 70s behind each front (2nd, 8th, 16th, 22nd, 26th). Cold dampness, that often follows late autumn fronts, did not occur in November. These fronts are expected to return periodically in December through February. Typically a dry month, November was true to form and then some – courtesy of the dry fronts.

Total monthly rainfall at Brownsville was 0.55 inches, 1.27 below average and 31st driest (since 1878. Total rainfall at Harlingen/Valley International was 0.15 inches, 1.35 inches below average, and ranking 7th driest compared with a combination of observations from the Airport and cooperative site, since 1911. Total rainfall at McAllen was 0.12 inches, 0.77 inches below normal, and ranking 12th driest compared with a combination of observations from Miller Airport and the McAllen water plant, since 1941.

Daily Temperatures, Harlingen/Valley International Airport, November 2011

Day	Maximum	Minimum	Average	Departure
1	87	56	72	-1
2	92	58	75	3
3	70	50	60	-12
4	75	46	61	-11
5	85	55	70	-2
6	84	75	80	9
7	88	73	81	10
8	92	71	82	11
9	74	56	65	-5
10	71	46	59	-11
11	77	37	57	-13
12	85	55	70	0
13	89	63	76	7
14	90	70	80	11
15	90	62	76	7
16	93	60	77	9
17	73	54	64	-4
18	87	52	70	2
19	92	69	81	14
20	91	75	83	16
21	88	78	83	16
22	91	62	77	11
23	79	54	67	1
24	82	52	67	1
25	87	57	72	7
26	88	62	75	10
27	67	41	54	-11
28	74	35	55	-9
29	86	43	65	1
30	79	51	65	1
Totals	83.5	57.3	70.4	2

Legend: Light blue: <10° below average; Light red: <10° above average, cyan: ≥10° below average; red: ≥10° above average.